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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/521,845	03/09/2000	Janos Szanyi	1434A2	3769

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PPG INDUSTRIES INC
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EXAMINER

PIZIALI, ANDREW T

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 09/09/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/521,845

Applicant(s)

SZANYI ET AL.

Examiner

Andrew T Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,6,8-11,14,16-18,21,23,26,27,30,32-45,48,49 and 51-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3,5,6,8-11,14,16,26,27,30,32-40,45,49 and 51-53 is/are allowed.
- 6) ☒ Claim(s) 17,18,21,23,41-44,48 and 54-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- ✓ 2. Claims 17-18, 21, 23, 41 and 58-60 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a phosphorous containing metal oxide layer or a mixed oxide of tin and silica (page 16, lines 1-33), does not reasonably provide enablement for a breaker layer comprising any metal oxide (other than tin oxide) and silica. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The applicant is required to amend the claims to limit the breaker layer to a phosphorous containing metal oxide layer and/or a mixed oxide of tin and silica.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 44 and 61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The relationship claimed between the thickness of the first layer and the thickness of the second layer is unclear. The current claims speak of the first and second layer thicknesses increasing and/or decreasing. It appears that the applicant intended to claim that the combined thickness of the first and second layer remains constant although the thickness

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of the first or second layer can be more or less than the other respective layer. Further clarification is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 42-44, 48 and 54-56 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,218,018 to McKown et al. (hereinafter referred to as McKown).

Regarding claims 42-44, 48 and 54-56, McKown discloses numerous articles comprising a glass substrate, a layer of tin oxide doped with fluorine, and a layer of tin oxide doped with antimony (see entire document). McKown discloses that the coated article may comprise a glass substrate with a gradient layer comprising tin oxide doped with fluorine and antimony having a thickness between 50 to 3000A (column 7, lines 21-56 and Figure 3).

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Regarding claims 42-44, McKown discloses that one or more additional layers of conductive antimony doped tin oxide (gradient or no gradient), fluorine doped tin oxide, or any other conventional layer, may be deposited on the gradient layer (column 9, lines 55-64). McKown discloses that the antimony doped tin oxide layers may have a thickness ranging from 800 to 3000A (column 9, lines 17-21 and Figure 4).

Regarding claim 48, the examiner asserts that the antimony doped tin oxide layer has a lower refractive index than the fluorine doped tin oxide layer.

The Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claim 57 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,218,018 to McKown (as applied to the above claims) in view of US Patent No. 5,356,718 to Athey et al. (hereinafter referred to as Athey).

Regarding claims 57 and 61, McKown discloses that the coated article may comprise a substrate with a gradient layer deposited thereon comprising tin oxide doped with fluorine and antimony (column 7, lines 21-56 and Figure 3). McKown discloses that a color suppression layer may be deposited on the substrate according to the two layer assemblage provided by the present invention (column 5, lines 14-21). McKown does not specifically mention depositing the color suppression layer on the substrate of the gradient layer assemblage provided by the present invention, but it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the color suppression layer in the gradient layer assemblage, because it may improve the color neutrality of the coated glass article.

McKown does not specifically mention a color suppression layer comprising a gradient layer, but Athey discloses that it is known in the art to include a color suppression layer comprising a gradient layer on a transparent substrate to suppress color effects commonly referred to as iridescence (column 1, lines 17-53). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a gradient color suppression layer, as disclosed by Athey, as the color suppression layer of McKown, because such a gradient layer suppresses undesirable iridescence.

Regarding claim 61, McKown discloses that the gradient layer may have a thickness between 50 to 3000Å (column 2, lines 19-38).

Allowable Subject Matter

9. Claims 1-3, 5-6, 8-11, 14, 16, 26-27, 30, 32-40, 45, 49 and 51-53 are allowed.
10. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 1-3, 5-6, 8-11, 14, 16, 26-27, 30, 32-40, 49 and 51-53, the prior art fails to teach or suggest a coating comprising at least one breaker layer comprising a metal oxide having at least phosphorous, or at least one breaker layer comprising amorphous tin oxide and silica or phosphorous, between the currently claimed first and/or second metal oxide layers.

Regarding claim 45, the closest prior art is USPN 6,218,018 to McKown, but McKown fails to teach or suggest the unexpected results of using the currently claimed antimony doped tin oxide strata thicknesses (see page 38, lines 1-25, of the current specification).

Response to Arguments

11. Applicant's arguments filed 7/7/2003 have been fully considered but they are not persuasive.

The applicant asserts that McKown does not mention the refractive indices of the antimony doped tin oxide layer or the fluorine doped tin oxide layer, and therefore, McKown does not anticipate claim 48. The examiner respectfully disagrees. The examiner asserts that McKown discloses an article comprising a substrate and a layer of fluorine doped tin oxide deposited over a layer of antimony doped tin oxide (column 7, lines 34-35 and column 6, lines 36-67). The examiner asserts that an antimony doped tin oxide layer has a lower refractive index than a fluorine doped tin oxide layer.

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In the Final Office Action mailed 5/6/2003 the applicant was directed to page 33, lines 7-9, of applicant's specification, indicating that antimony doped tin oxide has a lower refractive index than fluorine doped tin oxide. The applicant has since asserted that the examiner is utilizing applicant's own example for a basis to reject claim 48. The examiner respectfully disagrees. The rejection of claim 48 stands on its own merits. Applicant's specification was cited to demonstrate that antimony doped tin oxide inherently has a lower refractive index than fluorine doped tin oxide. Absent a showing to the contrary, the examiner continues to assert that the antimony doped tin oxide layer has a lower refractive index than fluorine doped tin oxide layer.

Regarding claim 54, the applicant asserts "Unlike applicant's claim 54 which has two regions (the first coating region and the third coating region) where there is only one of the dopants of the second region (transition region), Fig. 3 of McKown has two dopants throughout the coating with the concentrations of the dopants changing to provide a gradient (column 7, lines 22-27, of McKown)." The examiner respectfully disagrees. The applicant is asserting that claim 54 has two regions (the first coating region and the third coating region) where there is only one of the dopants, but the examiner contends that claim 54 is written with open language wherein the first and third regions comprise a first and second dopant, respectively. Claim 54 does not limit the first and third regions to only one of the dopants.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Piziali whose telephone number is (703) 306-0145. The examiner can normally be reached on Monday-Friday (7:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (703) 308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-3822.

atp
September 8, 2003


ANDREW T. PIZIALI
PATENT EXAMINER